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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,309	07/06/2001	Hidehiko Funaoka	010311	6699

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EXAMINER

CHANG, VICTOR'S

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 12/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/806,309

Applicant(s)

FUNAOKA ET AL.

Examiner

Victor S Chang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 27-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 27-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. The Examiner has carefully considered Applicant's remarks filed on 10/15/2003.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Rejections not maintained are withdrawn. In particular, Applicants' traversal regarding the rejection under 35 U.S.C. 112, second paragraph, is persuasive. As such, the rejection is withdrawn.

### ***Response to Amendment***

4. Claims 1-2, 7, 9-10, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kono et al. (US 4588633), substantially for the reasons set forth in section 5 of Paper No.14, together with the following additional observations.

With respect to Applicant's response contending that "The Examiner refers specifically to the disclosure of air permeability in Takita '583, although that reference is not cited in the present rejection" (Remarks, page 3, second paragraph), the Examiner would like to point out that the correct reference number for Takita is '183, not '583, and also apologizes for misplacing the reasoning pertaining to Takita '183 under section 5 of Paper No. 5. However, it should be noted that Takita '183 was a previously cited reference under section 2 of Paper No. 8.

Regarding Takita's Declaration attesting that not only is the thermal setting necessary but also it is extremely important to timely conduct the thermal setting

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(Remarks dated 3/24/2003, page 2, last paragraph) and the effect to the air permeability by a timely thermal setting is not recognized in each of US '633, US '183 and US '492, and the effect is unexpected (Remarks dated 3/24/2003, page 3), the Examiner notes although Kono lacks an express teaching of air permeability, suitable air permeability is believed to be either inherently disclosed, or an obvious optimization to one of ordinary skill in the art of microporous polyolefin membrane. Note also as evidence the previously cited state of the art Takita (US 5051183) which shows in Table I that the air permeability is in the range of 30-148 sec/100cc, i.e., Takita's microporous membrane has comparable or greater air permeability than the Applicants' membranes illustrated in Table A (see bottom paragraph on page 2, Paper No. 8). As such, clearly a suitable air permeability is within the skill of the art, i.e., not unexpected, and it appears that there is no direction relationship between "air permeability" and "timely thermal setting", which also renders Applicants' contention that "The argument regarding "timely thermal limitation" was that the prior art method, which did not have "timely thermal setting", could not achieve these limitations" (Remarks, page 3, third paragraph) notwithstanding, particularly in view of Applicants' acknowledgement that "timely thermal setting" is not recognized by Takita '183, as set forth above.

With respect to Applicants' argument, referring to the second Declaration (Exhibit B), that "there was no basis for concluding that the recited limitations would be inherent in Kono et al." (Remarks, page 3, 4<sup>th</sup> paragraph), the examiner repeats (see section 4 of Paper No. 10) that while the Declaration is persuasive that in US '183 the directivity of lamellas to the direction perpendicular to the membrane is lower than 40%, whereas the

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directivity in the instant claimed invention is at least 40%, Applicants still fail to provide sufficient evidentiary support that the directivity of lamellas to the direction perpendicular to the membrane of the primary reference of Kono is also lower than 40%, because the argument based on the relations between "air permeability" and "timely thermal setting" alone appears to be deficient, as set forth above. As such, the Examiner again strongly urges Applicants to further clarify the relations between unexpected "directivity of lamellas" and the "timely thermal setting" for the Kono reference as well.

5. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kono et al. (US 4588633) either individually, or in view of Takita et al. (US 5051183), substantially for the reasons set forth in section 6 of Paper No. 14, together with the additional observations as set forth above.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kono et al. (US 4588633) in view of Takita et al. (US 5922492), substantially for the reasons set forth in section 7 of Paper No. 14, together with the additional observations as set forth above.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 703-605-4296. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 703-308-2414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

VSC

DANIEL ZIRKE  
PRIMARY EXAMINER  
GROUP 1900-  
1700

*Daniel Zirke*